

SATELLITE COMMUNICATION SOLUTIONS

Product catalog 2026 · L-band to Q-band





RF EQUIPMENT FOR SATELLITE GROUND STATIONS — L-BAND TO Q-BAND

TESART designs and manufactures block upconverters, LNBs, high-power amplifiers, frequency converters, switch matrices and in-orbit test systems, as standard products or built to your frequency plan. Engineers and partners work with one team from requirements to commissioning and service.

0.5–40 GHz

L · S · C · X · Ku · Ka · Q

From L-band IF to Q-band; RF cable assemblies to 50 GHz

Why TESART

- **Designed and built in-house.** Our own microwave modules, assembly and final test, so we control every stage of the product
- **Built to your frequency plan.** Custom bands, power levels, matrix sizes, layouts and interfaces on top of the standard range
- **Integration-ready.** SCPI over Ethernet, web GUI and SNMP, 19-inch rack and outdoor formats for station M&C systems
- **Lifecycle support.** Warranty, repair, spares and upgrades for the installed base, with engineers who designed the equipment

Founded in 2015

120+ engineers and staff, incl. PhDs

Designed in Russia · Delivered worldwide

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BLOCK UPCONVERTERS C-BAND

Output power: 25 W | 40 W | 50 W | 80 W | 100 W
Output frequency: 5.725–6.525 GHz
BUC0206 SERIES · OUTDOOR



KEY FEATURES

- Covers the standard C-band uplink (5.925–6.425 GHz) within a 5.725–6.525 GHz output range
- Five power classes from 25 W to 100 W in one mechanical platform
- 30 dB gain control in 0.5 dB steps; RF mute and built-in self-test
- Automatic lock to an external 10 MHz reference delivered over the IF cable
- Remote M&C: SCPI over Ethernet, web GUI, SNMP, RS-232/RS-485
- Overdrive, temperature and fan status monitoring

KEY PARAMETERS

IF input

975–1775 MHz

Gain

≥ 60 dB

Gain control

30 dB / 0.5 dB

DC supply

48 VDC

DESCRIPTION

Outdoor block upconverter for satellite uplinks: L-band IF in, 5.725–6.525 GHz out, with full remote monitoring and control over Ethernet.

Ordering information

Model	Psat, min.	Psat, dBm
BUC0206-25W-C1	25 W	+44.0 dBm
BUC0206-40W-C1	40 W	+46.0 dBm
BUC0206-50W-C1	50 W	+47.0 dBm
BUC0206-80W-C1	80 W	+49.0 dBm
BUC0206-100W-C1	100 W	+50.0 dBm

C-BAND BUC SPECIFICATIONS

Guaranteed · typical values

Parameter	Specification	Typ.
Frequency		
Input (IF) frequency	975–1775 MHz	
Output (RF) frequency	5725–6525 MHz	
LO frequency	4750 MHz	
RF performance		
Gain	≥ 60 dB	
Gain adjustment range / step	≥ 30 dB / 0.5 dB	
Saturated output power (Psat)	25 / 40 / 50 / 80 / 100 W min.	
Gain flatness, full band	±1.5 dB	±1.0 dB
Gain variation over temperature ¹	±1.5 dB	±0.5 dB
In-band spurious ²	≤ -60 dBc	-65 dBc
Intermodulation, two-tone ³	≤ -25 dBc	-32 dBc
ACPR ²	≤ -26 dBc	-32 dBc
Input / output return loss ⁴	≥ 15 dB	17 dB
LO phase noise (SSB), dBc/Hz max., at offset		
100 Hz	-76	-79
1 kHz	-86	-98
10 kHz	-93	-107
100 kHz	-98	-108
1 MHz	-110	-117
Frequency reference		
Reference source	Internal, or external 10 MHz with automatic lock	
External reference level	10 MHz, -5 to +5 dBm (via IF input)	
Monitor & control		
Remote interfaces	SCPI over Ethernet · Web GUI · RS-232/RS-485 · SNMP	
Monitoring & protection	Input/output overdrive alarms · fan status · temperature · reference lock status · RF mute · self-test	
Interfaces, power & mechanical		
IF input connector	N-type (female), 50 Ω	
RF output	CPR-137G waveguide flange	
DC supply	48 VDC	
Dimensions	175 × 145 × 250 mm max.	
Scope of supply		
Standard	User documentation · pole-mount kit (Ø 90–150 mm) · waveguide flange hardware · mating power and M&C connectors	
Options	220 VAC / 48 VDC power supply · waveguide isolator	

¹ Gain does not fall below the nominal value over the operating temperature range.² At 3 dB output back-off from Psat.³ Two-tone, 5 MHz spacing, total output 3 dB below Psat.⁴ With waveguide isolator installed.

Specifications subject to change without notice.

BLOCK UPCONVERTERS KU-BAND

Output power: 2 W | 4 W | 6 W
Output frequency: 13.75–14.50 GHz
BUC0214 SERIES · OUTDOOR



KEY FEATURES

- Extended Ku-band uplink coverage — 13.75–14.50 GHz output from a 950–1700 MHz IF input
- Three power classes in one platform — 2, 4 and 6 W Psat (BUC0214-2W-Ku / -4W-Ku / -6W-Ku)
- Automatic lock to an external 10 MHz reference, with an internal reference option
- Input/output overdrive, temperature and reference-lock monitoring, with ready-status and reference-source indicators
- WR-75 waveguide RF output; N-type IF input, with an F-type 75 Ω option
- Compact and lightweight — 110 × 110 × 60 mm max., 1 kg max.

DESCRIPTION

Compact outdoor block upconverter for Extended Ku-band uplinks — 1 kg, WR-75 output, 13–26 VDC.

KEY PARAMETERS

IF input	Gain	DC supply	Weight
950–1700 MHz	≥ 56 dB	+13 to +26 VDC	1 kg max.

Ordering information

Model	Psat, min.	Peak power consumption, max.
BUC0214-2W-Ku	2 W	20 W
BUC0214-4W-Ku	4 W	30 W
BUC0214-6W-Ku	6 W	50 W

KU-BAND BUC SPECIFICATIONS

Guaranteed · typical values

Parameter	Specification	Typ.
Frequency		
Input (IF) frequency	950–1700 MHz	
Output (RF) frequency	13.75–14.50 GHz (Extended Ku)	
LO frequency	12.80 GHz	
RF performance		
Gain	≥ 56 dB	
Maximum input level, no damage	+13 dBm	
Saturated output power (Psat), min.	2 / 4 / 6 W	
Peak power consumption, max.	20 / 30 / 50 W (2 / 4 / 6 W models)	
Gain variation over temperature ¹	±2.5 dB	±2.0 dB
In-band spurious ²	≤ –60 dBc	–65 dBc
Intermodulation, two-tone ³	≤ –25 dBc	–28 dBc
ACPR ²	≤ –25 dBc	–28 dBc
Gain flatness, full band	±2.5 dB	±1.5 dB
Gain flatness, any 54 MHz	±2.0 dB	±1.0 dB
Input return loss	≥ 13 dB	16 dB
Output return loss	≥ 10 dB	13 dB
LO phase noise (SSB), dBc/Hz max., at offset		
100 Hz	–55	–60
1 kHz	–65	–70
10 kHz	–75	–85
100 kHz	–85	–90
1 MHz	–95	–105
Frequency reference		
Reference source	Internal (option) or external 10 MHz with automatic lock	
External reference level	10 MHz, –5 to +5 dBm (via IF input)	
Monitor & control		
Monitoring	Input/output overdrive · temperature · reference presence and lock status	
Indicators	Ready status · reference source	
Interfaces, power & mechanical		
IF input connector	N-type (female), 50 Ω; F-type (female), 75 Ω option	
RF output	WR-75 waveguide	
DC supply	+13 to +26 VDC	
Dimensions	110 × 110 × 60 mm max.	
Weight	1 kg max.	
Operating temperature	–40 °C to +55 °C	
Scope of supply		
Standard	User documentation · waveguide flange hardware · waveguide O-ring	

¹ Gain does not fall below the nominal value over the operating temperature range.

² At 3 dB output back-off from Psat.

³ Two-tone, 5 MHz spacing, total output 3 dB below Psat.

Specifications subject to change without notice.

PLL LNB

KU-BAND

Input frequency: 10.70–11.75 GHz | 11.75–12.75 GHz

IF output: 950–2150 MHz

DUAL-BAND · OUTDOOR



KEY FEATURES

- Dual-band coverage: 10.70–11.75 GHz (low) and 11.75–12.75 GHz (high) — the full Ku downlink band
- PLL local oscillator locked to an external 10 MHz reference, with an internal-reference option
- Noise figure 0.9 dB typical (≤ 1.2 dB guaranteed) across the band
- IF output doubles as DC power and 10 MHz reference input on a single N-type connector
- WR-75 waveguide RF input; F-type 75 Ω IF output available as an option
- Compact outdoor housing, -40 °C to $+60$ °C operating range

KEY PARAMETERS

Gain	Noise figure	DC supply	Peak power consumption
≥ 60 dB	0.9 dB typ.	+15 to +24 VDC	≤ 4 W

Options

Option	Description
75 Ω IF output	F-type (female) connector in place of the standard N-type, 50 Ω
Internal reference	Internal frequency reference in place of external 10 MHz lock

KU-BAND PLL LNB SPECIFICATIONS

Guaranteed · typical values

Parameter	Specification	Typ.
Frequency		
Input frequency, low / high band	10.70–11.75 GHz / 11.75–12.75 GHz	
Output (IF) frequency, low / high band	950–2000 MHz / 1150–2150 MHz	
LO frequency, low / high band	9.75 GHz / 10.60 GHz	
RF performance		
Gain	≥ 60 dB	
Maximum input level, no damage	−40 dBm	
Output P1dB	≥ +10 dBm	
Noise figure ¹	≤ 1.2 dB	0.9 dB
In-band spurious ²	≤ −55 dBc	−60 dBc
In-band harmonics ²	≤ −20 dBc	−25 dBc
Intermodulation, two-tone ³	≤ −25 dBc	−40 dBc
Gain flatness, per band	±1.5 dB	±1.0 dB
Input / output return loss	≥ 10 dB	15 dB
LO phase noise (SSB), dBc/Hz max., at offset		
100 Hz	−55	−60
1 kHz	−65	−70
10 kHz	−75	−85
100 kHz	−85	−90
1 MHz	−95	−105
Frequency reference		
Reference source	Internal (option) or external 10 MHz with automatic lock	
Interfaces, power & mechanical		
RF input	WR-75 waveguide	
IF output connector	N-type (female) — also DC power and 10 MHz reference input; F-type 75 Ω option	
DC supply	+15 to +24 VDC	
Peak power consumption	≤ 4 W	
Operating temperature	−40 °C to +60 °C	
Scope of supply		
Standard	User documentation · waveguide flange hardware · waveguide O-ring	

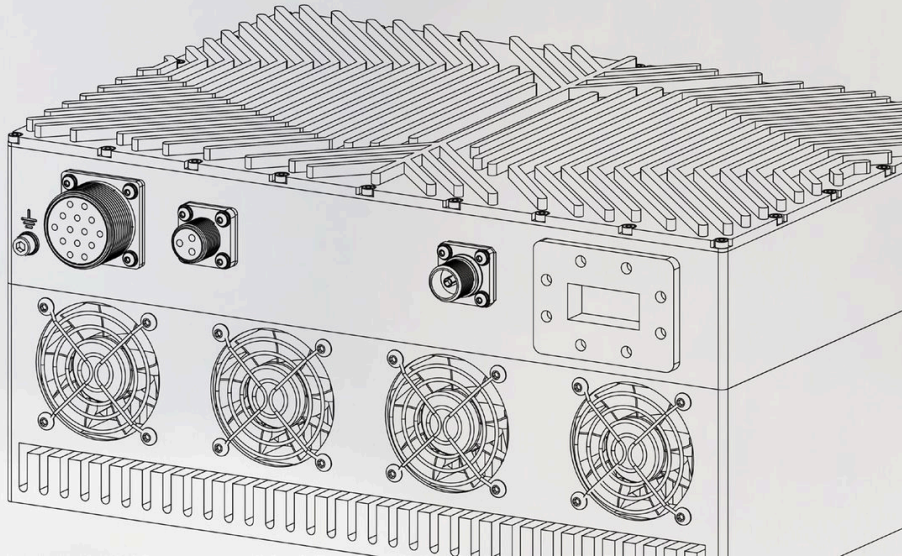
¹ At room temperature (+25 ± 10 °C).
² At output P1dB (+10 dBm) and maximum gain.
³ Two-tone, 5 MHz spacing, total output ≤ P1dB.
Specifications subject to change without notice.

HIGH-POWER AMPLIFIERS

Output power: 100 W to multi-kW

Frequency bands: L | C | X | Ku | Ka

BUC / SSPA SYSTEMS



KEY FEATURES

- Proven equipment of in-house design and manufacture
- Support over the full equipment lifecycle
- Engineering center with an experienced team of RF designers
- Engineering service, maintenance and repair
- Technical and operating documentation
- Option to manufacture equipment at our own facility

SERVICE & LIFECYCLE

Manufacturer's warranty

Full warranty on every high-power amplifier we ship.

Field engineering

Commissioning and repair carried out by TESART engineers.

DESCRIPTION

Satellite uplink availability depends on service availability. TESART supplies high-power transmitters (BUC/SSPA systems) with full warranty, maintenance and repair from its own engineering center — designed and manufactured to your requirements.

In-house spares

Spare-parts stock held at our own engineering center for fast turnaround.

Operator support

Consulting support for your operators on operation and setup.

Built to your requirements

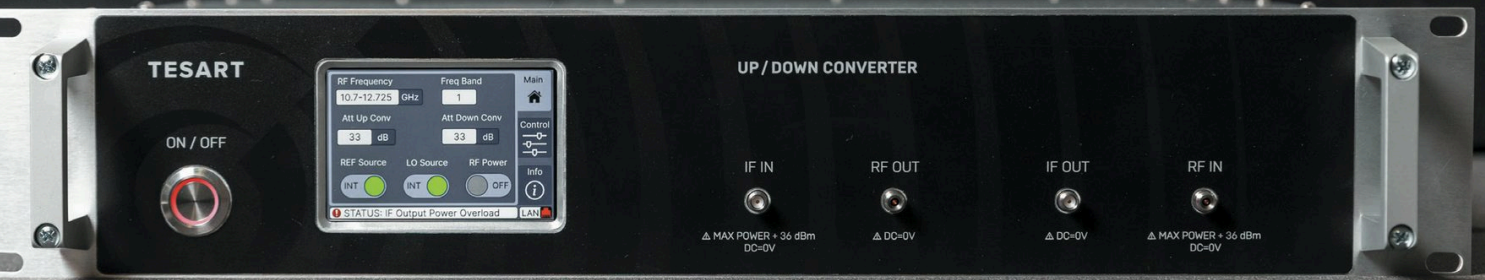
Output power, band and interface are configured for each project — tell us your frequency plan and site requirements.

FREQUENCY CONVERTERS

RF range: 3.4–40 GHz

IF: L-band

AC02 SERIES · RACK-MOUNT, 2U



KEY FEATURES

- Standard models for C, X, Ku, Ka and Q-band; custom frequency plans, layouts and specifications
- Frequency plans with improved filtering of conversion products
- In-house microwave modules and a synthesized LO with ultra-low phase noise
- External LO input and automatic lock to an external 10 MHz reference
- Smooth output level control over a wide dynamic range
- 1+1 redundant 220 VAC power supply
- Front-panel touchscreen, SCPI and web interface over Ethernet, built-in self-test
- Multi-channel configurations in a single chassis

DESCRIPTION

Up- and downconverters between L-band IF and C, X, Ku, Ka and Q-band for earth stations, teleports and test systems. Built on TESART's own microwave modules.

TYPICAL APPLICATIONS

- Teleport and gateway uplink / downlink chains
- Government X-band and military Ka-band terminals
- Payload in-orbit test and carrier monitoring
- Laboratory and production test benches
- Earth-observation data reception at 26 GHz

Need a different band?

We design converters to your frequency plan: custom sub-bands, LO frequencies, multi-channel chassis and interfaces.

STANDARD PRODUCT RANGE

25 standard models: 12 upconverters and 13 downconverters, IF: L-band

Upconverters L-band IF → RF · 12 models

Model	Frequency range, GHz
AC0206-U1-C	5.78–6.65
AC0207-U1-C2	6.45–7.05
AC0208-U1-X	7.90–8.40
AC0214-U1-Ku	14.00–14.50
AC0214-U1-Ku2	13.75–14.50
AC0230-U1-Ka	27.50–30.00
AC0228-U1-Ka2	27.50–28.50
AC0229-U1-Ka3	28.30–29.30
AC0230-U1-Ka4	29.00–30.00
AC0231-U1-Ka5	30.00–31.00
AC0238-U1-Ka6	37.00–38.00
AC0240-U1-Ka7	39.00–40.00

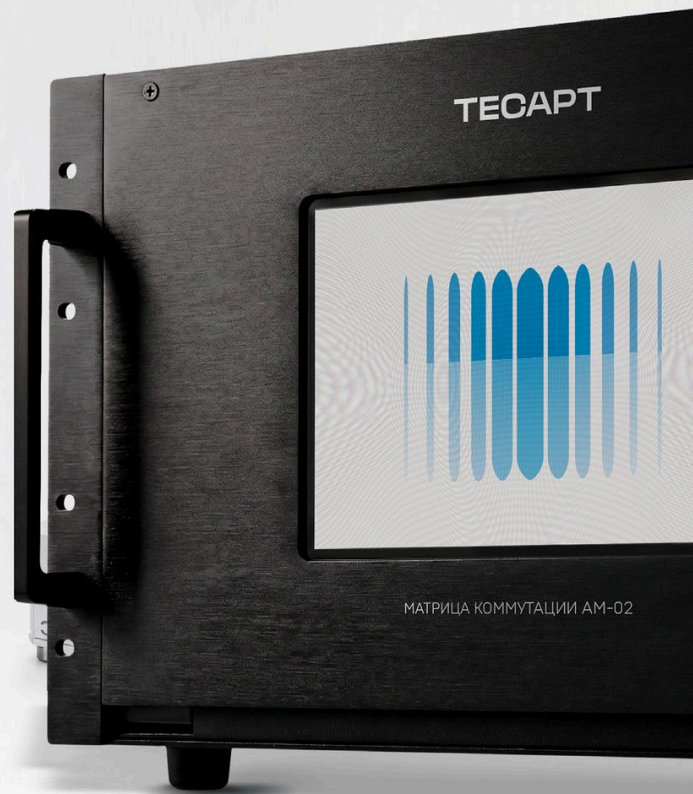
Downconverters RF → L-band IF · 13 models

Model	Frequency range, GHz
AC0204-D1-C	3.40–4.20
AC0204-D1-C2	4.50–4.80
AC0207-D1-X	7.25–7.75
AC0212-D1-Ku	10.70–12.75
AC0211-D1-Ku2	10.70–11.75
AC0212-D1-Ku3	11.70–12.75
AC0221-D1-Ka	17.20–21.20
AC0218-D1-Ka2	17.20–18.20
AC0218-D1-Ka3	17.70–18.70
AC0219-D1-Ka4	18.50–19.50
AC0220-D1-Ka5	19.20–20.20
AC0221-D1-Ka6	20.20–21.20
AC0227-D1-Ka7	26.00–27.00

SWITCH MATRICES L-BAND

Frequency range: 500–2500 MHz

AM-02 SERIES · 50 OR 75 Ω



KEY FEATURES

- Gain adjustment 30 dB in 0.5 dB steps
- Combining mode (several inputs to one output)
- Hot-swappable modules
- Parallel control
- Stable RF path performance
- Any-to-any switching with output combining; other architectures to order
- Integration with station M&C systems
- Remote control via SCPI and web interface over Ethernet
- Overload and interference protection
- Front-panel touchscreen
- Built-in self-test
- Multifunction configurations in a single chassis
- Warranty and post-warranty service

DESCRIPTION

Any-to-any or custom switching architectures, 8×8 to 16×64 and custom sizes, 500–2500 MHz, 50 or 75 Ω .

Ready-made L-band switch matrix line for satellite earth stations. The any-to-any architecture gives high port-to-port isolation and routes any input to any output, including combining several inputs onto one output. Designed and manufactured in-house; key RF assemblies use components from leading manufacturers — enabling confident support, warranty and post-warranty service and upgrades of installed units.

Need a custom configuration?

Standard models range from 8×8 in a 1U chassis to 16×64 and 32×32 in 12U, 50 Ω or 75 Ω . Need something outside this range? We build non-standard input/output counts (XX×YY), 75 Ω versions and special options to your frequency plan and rack layout.

L-BAND SWITCH MATRIX SPECIFICATIONS

Guaranteed · typical values

Parameter	Specification	Typ.
General		
Frequency range	500–2500 MHz	
Impedance	50 Ω (standard), 75 Ω (option)	
Number of inputs / outputs	8 to 64	
Switching type	Any-to-any with combining at outputs	
RF performance		
Gain	≥ 0 dB	
Noise figure	≤ 10 dB	
Gain adjustment range, per channel	≥ 30 dB	
Gain step	0.5 dB	
Maximum input level	0 dBm	
Gain flatness	±1.5 dB	±1.0 dB
Isolation	≥ 45 dB	50 dB
Input / output return loss	≥ 15 dB	17 dB
Interfaces & power		
RF connectors	SMA (female), 50 Ω; F-type for 75 Ω version	
Power supply redundancy	Two hot-swappable PSUs (1+1)	
Hot-swappable modules	Switching / combining cards, power supplies	
Control & monitoring		
Control	SCPI · web interface · front-panel touchscreen	
Additional functions	Temperature monitoring · built-in self-test · settings memory	

Model range 500–2500 MHz · 8 standard chassis + custom

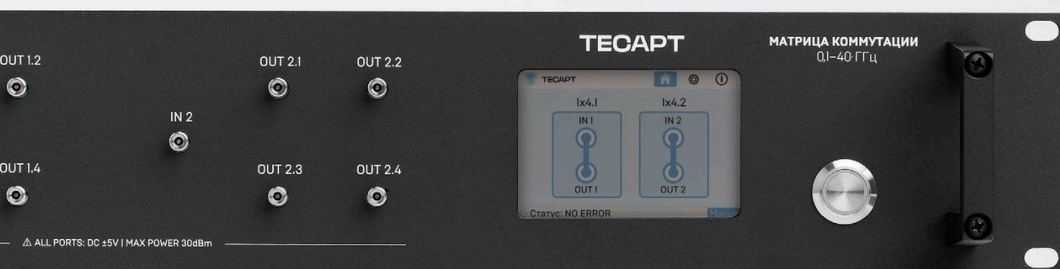
Model	Configuration	Chassis height	Typical application
AM-02-08-08	8×8	1U	Compact test benches, small earth stations
AM-02-08-16	8×16	4U	Signal distribution to demodulators
AM-02-08-32	8×32	6U	Earth stations, lab benches
AM-02-08-64	8×64	12U	High-density output distribution
AM-02-16-16	16×16	4U	Mid-size earth stations
AM-02-16-32	16×32	6U	Mid-size VSAT teleports
AM-02-16-64	16×64	12U	High-density output distribution
AM-02-32-32	32×32	12U	DTH and broadcast teleports
AM-02-XX-YY	Custom	—	Non-standard input/output counts, 75 Ω version, special options

Specifications subject to change without notice.

SWITCH MATRICES ELECTROMECHANICAL

Frequency range: **DC–40 GHz**

AM SERIES · 19-INCH RACK, 2U TO 6U



KEY FEATURES

- Wide frequency range, DC to 40 GHz
- Electromechanical switches with low insertion loss and high isolation
- Excellent amplitude and phase repeatability when switching
- Overload and interference protection
- 19-inch rack mounting
- Front-panel touchscreen
- Remote control via SCPI commands
- Web interface over Ethernet
- Built-in self-test
- Multifunction configurations in a single chassis
- Warranty and post-warranty service

GENERAL SPECIFICATIONS

Inputs

Up to 64

Outputs

Up to 64

Maximum input power

+30 dBm

Power supply redundancy

Optional

DESCRIPTION

Electromechanical coaxial switch matrices with low insertion loss, high isolation and repeatable switching up to 40 GHz.

High repeatability, isolation and low insertion loss; wide frequency range, multichannel switching structure and a wide choice of options make these matrices suitable for test & measurement and satellite communications. Designed and manufactured in-house; key RF assemblies use components from leading manufacturers.

ELECTROMECHANICAL SWITCH MATRIX SPECIFICATIONS

Performance by band Max. / typ.

Band	Insertion loss, dB (max. / typ.)	Isolation, dB (min. / typ.)	VSWR (max. / typ.)
DC–6 GHz	0.30 / 0.25	80 / 100	1.30 / 1.20
6–12.4 GHz	0.40 / 0.35	75 / 100	1.40 / 1.25
12.4–18 GHz	0.50 / 0.40	70 / 95	1.50 / 1.30
18–26.5 GHz	0.80 / 0.60	65 / 95	1.60 / 1.35
26.5–40 GHz	1.00 / 0.80	60 / 90	1.70 / 1.50

Model range AM series

Model	Configuration	Frequency	Height
AM-18-2-SP4T	2 × SP4T	DC–18 GHz	2U
AM-26-2-SP4T	2 × SP4T	DC–26.5 GHz	2U
AM-40-2-SP4T	2 × SP4T	DC–40 GHz	2U
AM-18-2-SP6T	2 × SP6T	DC–18 GHz	2U
AM-26-2-SP6T	2 × SP6T	DC–26.5 GHz	2U
AM-40-2-SP6T	2 × SP6T	DC–40 GHz	2U
AM-18-2-SP8T	2 × SP8T	DC–18 GHz	2U
AM-26-2-SP8T	2 × SP8T	DC–26.5 GHz	2U
AM-40-2-SP8T	2 × SP8T	DC–40 GHz	2U
AM-40-1-SP36T	1 × 36	DC–40 GHz	4U
AM-40-1-4P36T	4 × 36	DC–40 GHz	6U

Specifications subject to change without notice.

IN-ORBIT TEST SYSTEM

Frequency bands: L | S | C | Ku | K | Ka

PAYLOAD TEST · RACKS AND DEDICATED SOFTWARE



KEY FEATURES

- Automated verification of payload characteristics during in-orbit testing
- Measurements during the outgassing phase across all Ka-, Ku- and S-band transponders
- Storage of factory (ground) test data required for the checks
- Downlink spectrum monitoring of payload channels
- Power measurements of received signals using built-in instrument functions
- Processing, visualization and storage of RF test results and spectrum monitoring data

DESCRIPTION

Measuring racks and software for testing spacecraft payloads in orbit, built to customer requirements.

TESART develops payload in-orbit test (IOT) systems for testing spacecraft in orbit, covering a wide range of payload measurements during in-orbit testing. The system is a set of measuring instruments and other equipment integrated into racks and operated by a server running dedicated software. Depending on the task it may include measuring instruments, switch matrices, frequency converters, a GNSS (GLONASS) timing receiver, server and software, microwave cable kit and other equipment.

SYSTEM COMPOSITION

- Measuring instruments
- Switch matrices
- Frequency converters
- GNSS (GLONASS) timing receiver
- Server and dedicated software
- Microwave cable kit
- Other task-specific equipment

Designed to customer requirements

Every IOT system is configured for the customer's spacecraft and ground infrastructure: the mix of measuring instruments, switch matrices, frequency converters and software is selected per project.

IN-ORBIT TEST SYSTEM SPECIFICATIONS

Parameter	Value
Transmit paths frequency range ¹	950–2000 MHz
Injection paths frequency range ¹	950–3000 MHz
Receive frequency range ¹	950–3000 MHz
RF ports	2 transmit · 3 injection · 4 receive
Power supply	Single-phase AC, three-wire with protective earth, 220 V ± 20 V
Power consumption	≤ 3.2 kW
Dimensions (L × W × H)	≤ 1087 × 597 × 2019 mm
Weight	≤ 300 kg

Measured parameters & accuracy

Measurement	Measurement uncertainty ²
G/T	1.5 dB
Saturated EIRP per transponder	1.4 dB
Saturation flux density (SFD) per transponder	1.4 dB
AM/AM characteristic	1.4 dB
Transponder gain-step range and limits	≤ 1 dB
Transponder in-band frequency response	≤ 1.4 dB
Beacon translation frequency and frequency error	≤ 150 Hz
Receive/transmit antenna patterns	≤ 1.4 dB
Selectivity	≤ 1 dB
Beacon EIRP	≤ 1.4 dB

¹ Other bands are covered with optional TESART frequency converters.

² Excluding uncertainty contributed by the payload itself.

Specifications subject to change without notice.

FLAT-PANEL TERMINAL KU-BAND

Transmit: 13.75–14.5 GHz

Receive: 10.7–12.7 GHz

MAS SERIES · 5 MODELS



IN DEVELOPMENT

KEY FEATURES

- Low-profile housing that does not disturb vehicle aerodynamics
- Works with standard Ku-band GEO satellite networks
- Automatic satellite tracking while moving
- No moving parts, high reliability
- Dual-beam operation (two satellites at once)
- Lightweight design and fast deployment
- Optimized power consumption

DESCRIPTION

Electronically steered flat-panel Ku-band antenna system for GEO connectivity on the move.

The electronically steered flat antenna opens new possibilities for mobile and fixed satellite communications via geostationary satellites. With a phased array and fully electronic beam steering it provides reliable connectivity on the move — on trains, ships and road vehicles — and at fixed sites. Ka-band version in development.

MAS TERMINAL SPECIFICATIONS

Preliminary · 5 models

Parameter	MAS-0101	MAS-0102	MAS-0104	MAS-0204	MAS-0208
Receive data rate, Mbps	1	1	1	3	3
Transmit data rate, Mbps	0.5	1	3.5	3.5	6
Transmit frequency, GHz	13.75–14.5	13.75–14.5	13.75–14.5	13.75–14.5	13.75–14.5
Receive frequency, GHz	10.7–12.7	10.7–12.7	10.7–12.7	10.7–12.7	10.7–12.7
Polarization	Circular, linear	Circular, linear	Circular, linear	Circular, linear	Circular, linear
G/T ¹ , dB/K	4.5	4.5	4.5	6.5	6.5
EIRP ¹ , dBW	39	39	47	47	51.7
Transmit array, mm	240 × 416	240 × 416	480 × 832	480 × 832	960 × 832
Receive array, mm	276 × 449	276 × 449	276 × 449	276 × 898	276 × 898
Overall dimensions, mm	630 × 500	630 × 500	866 × 900	866 × 950	1350 × 950

¹ At 60° scan angle, 15° elevation.

Preliminary specifications — product in development; specifications subject to change without notice.

SEMI-RIGID CABLE ASSEMBLIES

Class: [test-grade](#)
Frequency range: [DC–50 GHz](#)
Features: [repeatable insertion loss](#) | [phase stability](#)
CR220 SERIES · FOR MEASUREMENT AND CALIBRATION SETUPS



CR220 SEMI-RIGID CABLE ASSEMBLIES

Parameter	Specification
Frequency range	DC–50 GHz
Impedance	50 Ω
Minimum bend radius	7 mm
Outer diameter	2.2 mm
Operating temperature	–60 °C to +100 °C
Connectors	S = SMA · 3 = 3.5 mm · K = 2.92 mm · 2 = 2.4 mm · 5 = MMPX

Performance by band

Band	Insertion loss, dB/m (max. / typ.)	VSWR (max. / typ.)
DC–10 GHz	2.7 / 2.4	1.20 / 1.15
10–18 GHz	3.8 / 3.5	1.20 / 1.15
18–26.5 GHz	4.8 / 4.5	1.25 / 1.20
26.5–40 GHz	6.0 / 5.7	1.30 / 1.25
40–50 GHz	7.2 / 6.9	1.35 / 1.25

Typical performance — 15 cm assembly, 2.92 mm connectors

VSWR 1.21 max. at 30.5 GHz (same assembly)

Parameter	10 GHz	18 GHz	26.5 GHz	40 GHz
Insertion loss	0.29 dB	0.44 dB	0.61 dB	0.79 dB

Ordering example: CR220-40-KMS-KMS-150 — CR220 series, DC–40 GHz, 2.92 mm male straight connectors on both ends, length 150 mm. Part-number codes: see Flexible cable assemblies.
Specifications subject to change without notice.

FLEXIBLE CABLE ASSEMBLIES

Frequency range: DC–50 GHz
Shielding effectiveness: ≥ 90 dB



KEY FEATURES

- Test-grade, phase-stable and general-purpose assemblies
- Low insertion loss
- Wide choice of connector types
- Made to customer requirements
- Operating temperature: high-temperature versions up to +165 °C, low-temperature versions down to –60 °C

DESCRIPTION

High reliability and repeatability; low insertion loss, phase stability and a protective metal spring armor make these assemblies well suited to test and measurement work.

CABLE ASSEMBLY PART NUMBERING

One part-number system covers flexible and semi-rigid (CR220) assemblies. Example:

CF510	–	18	–	3MS	–	3FP	–	1000
Series		Frequency code		Connector, end 1		Connector, end 2		Length, mm

Connector field = type + gender + style code: 3MS = 3.5 mm, male, straight; 3FP = 3.5 mm, female, panel.

Series	Frequency code	Connector type	Gender	Style
CF495	01 DC–1 GHz	2 2.4 mm	N N-type	S Straight
CF400	06 DC–6 GHz	K 2.92 mm	M MCX	P Panel
CF420	18 DC–18 GHz	3 3.5 mm	III Type III	R Right-angle
CFA700	26 DC–26.5 GHz	S SMA	IX Type IX	
CFA830 (A = armored)	40 DC–40 GHz	B BNC	VI Type VI	
SFC220	50 DC–50 GHz	4 SMP		
SFC250				
CR220				

Specifications subject to change without notice.



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Datasheets, specifications and enquiries