XMU+ Environmental, Safety and Specifications

Physical

Unit Dimensions:	177H x 444W x 330D mm (7.00H x 17.50W x 13.00D inches)
Rack Width:	19” (23” rack can be used if ordered with the 23” rack mounting bracket)
Rack Space:	4U
Shipping Dimensions:	260H x 500W x 500D mm (10.25H x 19.70W x 19.70D inches)
Unit Maximum Weight:	9.4 Kg (20.7 pounds)
Shipping Maximum Weight:	12.9 Kg (28.4 pounds)

Power and Thermal

Power Consumption:	220 Watts maximum (dependant on installed card type and quantity)
Heat Production:	220 Watts (750 BTU/hr) maximum (dependant on installed card type and quantity)

Environmental

Temperature:	0°C - 40°C (32°F - 104°F) Adequate cooling or heating must be provided to guarantee this range.
Dust:	Do not operate in conductive dust atmospheres (i.e. coal dust, metal dust, etc.). Do not operate in combustible dust atmospheres (i.e. saw dust, flour, etc.).
Humidity / Moisture:	Do not operate outdoors or in conditions where condensation forms.
Atmosphere:	Do not operate in explosive atmospheres (i.e. natural gas fumes, oil based paint fumes, etc.).

Power Supply Cards

AC Input Voltage:	Auto ranging 100 - 240 V 50/60 Hz
DC Input Voltage:	40 - 60 VDC (automatically protected from reverse polarity)
Output Voltages:	+5, +12, and -5 V are supplied to the XMU+ electronics.

Hot Swap Features:

- Status indicator (green if all output voltages nominal)
- Hot insertion / extraction management
- Soft start
- Status detection by control card

Line Cards

Hybrid Analog (includes SH8 and MWR derivatives):

Connector:	RJ21
Output Level:	-15 dBm / -9 dBm (high volume)
Output Impedance:	600 Ω nominal (FCC / IC / ETSI ES 203 021-2 compatible / ETSI ES 203 021-3 compatible)
Loop current:	10 mA - 60 mA (limiting)
Off Hook Loop Voltage:	40VDC maximum
Control Relay Current:	100 mA maximum (60 VDC maximum)
Start Input (Voltage Sense):	10 mA at 48 VDC (60 VDC maximum)
Start Input (Contact Closure):	5 mA (maximum)

Low Impedance Analog

Connector:	RJ21
Output Level:	-15 dBm / -9 dBm (high volume)
Output Impedance:	25 Ohms nominal (24 600 Ω ports in parallel)
Loop current:	10 mA - 60 mA (limited)
Off Hook Loop Voltage:	40VDC maximum
Control Relay Current:	1 A maximum (60 VDC maximum)
Start Input (Voltage Sense):	10 mA at 48 VDC (60 VDC maximum)
Start Input (Contact Closure):	5 mA (maximum)

Music on Hold (MOH) Card

Connectors:	RCA jacks
Input Impedance:	10 KΩ nominal
Input level (AGC onset):	-30 dBm (note: POTS / CO compatible)
Output Impedance (user configurable):	8 or 600 Ω
Output Level (user configurable):	-15, -9, +9 dBm (600 Ω) / 1 W (8 Ω)

T1 Digital Line Card

Connector:	RJ45
Impedance:	100 ohm balanced
Line length:	0-1000 ft.
Signaling:	Loop start (ring with loop disconnect), E&M (immediate start, wink start)
Line Coding:	AMI, B8ZS
Framing Format:	SF/D4 (A & B bit), ESF (A, B, C, D bit).

Important

The XMU+ unit must be installed in a location that meets all the requirements. The installation process consists of physical installation at the appropriate location, connecting the XMU+ to its designated power supply, and checking system start up.

Caution:

Do not connect PSTN cables to the ALARM or NETWORK ports.

Caution:

Since the AC power cord is the disconnect for the XMU+, ensure that the AC receptacle is near the unit.

Caution:

The installation of an XMU+ unit should only be completed by a qualified telecommunications electronics technician. Interalia® cannot be held responsible for damage to parts or equipment caused by improper handling or installation.

Caution:

The cabling of the XMU+ to the PBX should only be completed by a qualified telecommunication technician. Standard electrostatic discharge precautions must be followed when handling any internal components. Standard ESD handling precautions should be observed. Interalia cannot be held responsible for damage to parts or equipment caused by improper handling or installation.

DC Power Connection

Certain PBX units supply a DC voltage to which the XMU+ can be connected using a flying lead wire. For dual DC power supplies, use two flying lead wires and a separate terminal strip and fuse for each. XMU+ DC power should always be wired by a DC wiring trained technician.

Note:

Before you start to wire DC power, ensure the correct fuse rating (5 amps minimum) is used by the PBX. The actual fuse rating used to wire the XMU+ DC power should not exceed the safe rating of the wire used.

1. Connect the appropriate -48 VDC wires to the designated inputs on the XMU+ terminal strip:

- Ground to electrical ground
- Positive to +
- Negative to -

2. Connect the appropriate -48 VDC wires to the designated outputs on the PBX.
3. Since the XMU+ immediately activates when it is supplied with DC power, you should check system start up.
4. Repeat Steps 1 to 3 for systems with a secondary DC power supply.

Caution:

The cabling of the XMU+ to the PBX should only be completed by a qualified telecommunications / electronics technician. Standard static discharge precautions must be followed when handling any internal components. ESD precautions should also be observed.

XMU+ Control Card Connection

MODEM (RJ-11 connector):

The modem must be connected with 26 AWG hook-up wire / PSTN line cord.

XMU+ Approvals

Safety Approvals

CAN/CSA-C22.2 No. 60950-00,3rd Edition	TELECOMMUNICATION EQUIPMENT – Safety Part 1: General Requirements
CAN/CSA-C22.2 No.60950-00, -3rd Edition/UL 60950, 3rd Edition, NRTL Program	TELECOMMUNICATION EQUIPMENT – Safety Part 1: General Requirements – To US Requirements
IEC 60950-1 2005/Am1:2009/Am2:2013	Information Technology Equipment – Safety Part 1: General Requirements
RoHS	Dir 2011/65/EU
WEEE	Dir 2012/19/EU

Telecom Approvals

TIA-968-B	Telecommunications, Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network
CS-03 Part I, issue 9, Amendment 4, Dec 2010	Requirements for terminal equipment and related access arrangements intended for direct connection to analogue wireline facilities.
ETSI ES 203 021-2 V2.1.2 (2006-01) ETSI ES 203 021-3 V2.1.2 (2006-01)	Harmonized basic attachment requirements for Terminals for connection to analogue interfaces of the Telephone Networks; Update of the technical contents of TBR 021, EN 301 437, TBR 015, TBR 017;

Emissions Approvals

EN55022 / CISPR 22	Conducted Emissions 0.15 MHz – 30 MHz, Class A
EN55022 / CISPR 22	Radiated Emissions 30 MHz – 1 GHz, Class A
EN 55024 / EN 61000-3-2	Current Harmonics Emissions, Class A
EN 55024 / EN 61000-3-3	Voltage Fluctuations and Flicker Emissions
EN55024 / EN 61000-4-3	Radiated E-Field Immunity 80 MHz – 1 GHz, Class A
EN55024 / EN 61000-4-6	Conducted Immunity Voltage 150 kHz – 80 MHz, Class A
EN55024 / EN 61000-4-4	Electrical Fast Transients/Burst Immunity, Class B
EN55024 / EN61000-4-2	Electrostatic Discharge Immunity, Class B
EN55024 / EN 61000-4-5	Surge Immunity, Class B
EN55024 / EN 61000-4-11	Voltage Dips and Interrupts, Class B, C
EN55024 / EN61000-4-8	Power Frequency Magnetic Field Immunity, Class A

FCC Part 15 Subpart B / C-0103455-EM-1-1	
FCC Part 15.109 ICES-003 Issue 4 / ANSI C63.4 CAN/CSACEI/IEC CISPR 22:02	Radiated Emissions 30 MHz – 1 GHz
FCC Part 15.109 ICES-003 Issue 4 / ANSI C63.4 CAN/CSACEI/IEC CISPR 22:02	Conducted Emissions 150 kHz – 30 MHz
Industry Canada	
IC ID: 557A-SBXAP / 557ASBXAP	