ARRIS   APEX 1000

ALL-PURPOSE EDGE QAM

The APEX1000, ARRIS' next-generation all-purpose edge QAM, provide flexibility, high availability, high QAM density, encryption capability and low power in an extremely cost-effective 1 RU platform. Up to three removable and hot-swappable QAM modules can be installed in the chassis. Each module provides two RF ports, which support up to 6 QAM channels each. Any of the 36 QAM channels available can be used for video on demand (VOD), switched digital video (SDV), broadcast services, or DOCSIS® high-speed data (through support for the M-CMTS architecture).

- Physical Chassis – 1 RU chassis with support up to 36 8-MHz QAM channels or up to three removeable and hotswappable QAM modules
- QAM-Modules – available in standard-density (SD) configuration, high-density (HD) configuration and a QAM module software upgrade to field-convert a SD module to a HD module
- Power Consumption – extremely low power consumption
- GigE Interface – four GigE Interfaces with support for IGMPv3 and transport stream reduncdancy
- Power Supplies – Supports up to two hot-swappable redundant load-sharing power supplies; supports two AC, two DC or either 1 AC or 1 DC
- SDV and VOD Standards – Standards based solutions
- M-CMTS Standards – Software upgradeable to support the M-CMTS interfaces, including DTI, DEPI and ERMI
- capable of supporting encryption through DVB Simulcrypt
- Full Video EQAM Feature Set
  - De-jittering of CBR and VBR input streams
  - Receive either MPTS or SPTS
  - Transmit MPTS
  - Support for MPEG remultiplexing, PID remapping, PSI generation
  - Support for external DVB SI generator
  - Supports SNMP for configuration and control

SPECIFICATIONS

MODULAR CHASSIS	
Chassis Height	One RU
Dimensions	1.7 in x 19.0 in x 24.9 in
Weight	23 lb(fully loaded)
QAM Modules	Up to three per chassis; purchase 2X4, 2X8 or 4X4 modules; software upgrade 2x4 to 2x8
Hot-Swappable	Yes

RF PORTS	
2x4, 2x8:	Two per QAM module
4x4:	Four per QAM module

QAM CHANNELSPER RF PORT	
2x4 module	Up to four
2x8 module	Up to eight
4x4 module	Up to four

POWER	
Power Supplies	Up to two per chassis
Load Sharing	Yes
Redundant	Yes
Hot-Swappable	Yes
Configurations	One or two AC One or two DC
AC Power Supply	100 to 240 VAC, 50/60 Hz
DC Power Supply	−40 to −75 VDC
Power Consumption	<4 W/QAM channel fullyloaded (192 W typical)

ENVIRONMENTAL	
Operating Temperature	0 °C to 40 °C
Storage Temperature	−40 °C to 70 °C
Cooling	Five fans, front-to-backairflow
Operating Humidity	5% to 95%

FEATURES	
Broadcast Video	Supported
VOD/SDV	RTSP, RPC, and UDP portmapping configurable on aper-QAM–channel basis
M-CMTS	DEPI and DTI
Encryption and CA	MediaCipherand SCTE-52,Broadcast and CTE(for VOD); upgradable CSAand AES Full session VODencryption
Configuration/Control	Element Manager(SNMP),ARRISSDM(SNMP), console port(RS-232)

GIGABIT ETHERNET INPUT/OUTPUT	
GigE MPEG Data	Receive only
Physical Ports	Four SFP slots
IGMPv3	Supported
Optical SFP Support	850, 1310, 15xx nm
Electrical SFP Support	1000Base-T

FAST ETHERNET INPUT/OUTPUT	
Physical Ports	Two RJ-45 Ethernet

RF OUTPUT	
ITU J.83 Annex A, B, C; DRFI	
QAM Constellations	256 QAM and 64 QAM
Center Frequency Range	57 to 999 MHz (2x4 and 2x8 modules) 69 to 999 MHz(4x4 module)
Carrier Frequency Step Size	250 KHz
RF Level Step Size	0.2 dB
Maximum RF Output Level (software version 2.1.0 or higher)	
One active channel	62 dBmV
Two active channels	58 dBmV
Four active channels	54 dBmV
Six active channels	52 dBmV
Eight active channels	51 dBmV
Input Impedance	75Ω

ORDERING INFORMATION

INDIVIDUAL COMPONENTS		
Component	**Description**	**Part Number**
APEX1000 Chassis	QAM modules and power supply modules sold separately	540274-003-00
QAM Module (2x4)	Two RF ports per module enable up to four QAMs per port	540273-001-00
QAM Module (2x8)	Two RF ports per module enable up to eight QAMs per port	540273-002-00
QAM Module (4x4)	Four RF ports per module enable up to four QAMs per port	540273-005-00
Power Supply Module (AC)	AC power supply	540272-001-00
Power Supply Module (DC)	DC power supply	540272-002-00
SET CONFIGURATIONS		
APEX1000 V48 AC configuration	Includes APEX1000 V48 AC along with the Broadcast support license	541928-005-00
APEX1000 V48 DC configuration	Includes APEX1000 V48 DC along with the Broadcast support license	541928-006-00
APEX1000 V24 AC configuration	Includes APEX1000 V24 AC along with the Broadcast support license	541928-007-00
APEX1000 V24 DC configuration	Includes APEX1000 V24 DC along with the Broadcast support license	541928-008-00
QAM UPGRADE		
QAM Module Upgrade	Field-convert a 2x4 QAM module to a 2x8 QAM module	540400-001-00