

ARRIS WiDox Wireless Solutions

DOCSIS® Based Wireless Modem Termination System



Application

A CableLabs DOCSIS® 2.0 based Wireless Modem Termination System (WMTS) designed for providing advanced IP services over DOCSIS® based wireless networks. The ARRIS WMTS offers operators of any size the opportunity to deploy next generation IP services in wireless networks worldwide.

Features

- Multiple Downstream operational modes: QAM64, QAM16, and QPSK
- More upstream modulations including SCDMA
- Upstream Compression Technology with A-TDMA technology
- Improved multipath distortion and error correction
- Flexible Upstream Channel Configurations (2, 4 or 6)
- Full Quality of Service for VOIP services
- Supports over 3000 subscribers
- Efficient and Automatic Bandwidth Management
- Superior RF performance including active ingress noise cancellation
- Redundant Power Supplies
- Compact size (1 rack unit)

Architectural Overview

The system utilizes a dual RISC processor architecture for supporting high traffic volume along with excellent latency control and ample reserve processing resources. Transmit and receive capacity is scalable with a single system supporting one downstream RF channel and up to six upstream RF channels. The two network interfaces provided support 10/100/1000 BaseT Ethernet.

Advanced RF Performance

The C3 WMTS includes a fully digital receiver with active ingress noise suppression and an integrated upconverter. The receiver has the ability in TDMA, ATDMA and SCDMA modes to cancel both wideband and multiple ingress noise, cancel co-channel interference and suppress burst noise in the upstream.

Virtual LAN (VLAN) Support

The C3 WMTS supports end-to-end VLANs for advanced data applications such as business class services or multiple ISP support. The 802.1Q VLAN protocol stack ensures seamless integration into existing 802.1Q VLAN based networks and supports 378 VLANs with up to 4094 VLAN IDs. VLANs can be provisioned between the C3 WMTS and the modems without running client based software and optionally provide downstream broadcast privacy. For business class services, each VLAN can provide a secure and private connection between or to customer end-points in the cable plant. For multiple ISPs or "open access", the C3 WMTS's VLAN support can maintain separate VLAN for management for each ISP's modem population.

Operator Selectable Layer 2 or Layer 3 Forwarding

Networks implementing Layer 2 bridging technology can take advantage of the C3 WMTS's Layer 2 mode of operation. Additionally the C3 WMTS offers static routing and an optional choice of RIPv2 or OSPFv2 Layer 3 routing protocols. The C3 WMTS supports high packet forwarding throughput. One advanced processing core is dedicated to packet data forwarding activities ensuring low-latency queuing of packets through the system. The network interface supports Fast or Gigabit Ethernet that supports data rates up to one Gbps.

- **Versatile design delivers next generation IP services quickly**
- **Superior RF performance for challenging wireless applications**
- **Advanced technology maximizes subscriber service penetrations**



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Specifications

Downstream:	RF Frequency Range (MHz)..... 88-860
	Modulation QAM256, QAM64, QAM16, QPSK
	Data Rate (Mbps) (Max.) 7.5 – 53.6
	RF Output Level (dBmV)..... +45-+61
Upstream:	RF Frequency Range (MHz)
	US DOCSIS 5 to 42
	Euro-DOCSIS 5 to 65
	Japanese DOCSIS 5 to 55
	Modulation QPSK, 8QAM, 16QAM, 32QAM, 64QAM, & 128QAM, SCDMA
	Data Rate (Mbps) (Max.) 5.12 – 40.96
Receive Input Level (dBmV) - 20 to 26	
Installation Environment:	RF Interfaces External 'F' type connector
	Network Interfaces Dual RJ-45 Ethernet connections
	Network-Side Interfaces 10/100/1000 BaseT Ethernet
	Power. Dual power supply unit: -48 volt DC or universal AC
	Powering options: AC Powering 100 – 240 VAC, 2A, 47-63 Hz DC Powering 40-60V, 4A Power Consumption 80 Watts Max power consumption
Physical	Operating Temperature °F (°C)..... 32-104 (0-40)
	Storage Temperature °F (°C)..... -40 to 167 (-40 to 75)
	Operating Humidity (Min.-Max.) (Non condensing). 10-80%
	Dimensions (H x W x D) in. (cm)..... 1.75 x 19 x 18.3 (4.4 x 48.3 x 46.5)
	Weight (kg) 10
Software Support	DOCSIS 2.0, Euro-DOCSIS 2.0
	DHCP Relay Agent (Option 82)
	Layer 2 Bridging
	PPPoE support in routing mode
	DOCSIS MIBs and ARRIS enterprise MIBs
	Ingress Noise Suppression
	Command Line Interface (CLI)
	SNMP v1, v2 and v3
	CLI Configurable SNMP
	Telnet
	In-band or out-of-band management
	Security: up to 30 ACLs with 20 entries per ACL
	Upstream Cable Modem Load Balancing
	802.1Q VLANs Basic
	802.1Q VLAN Advanced (optional)
	Static Routing
	RIPv2 (RFC 2453) (optional)
	IGMP Proxy
	OSPFv2 (RFC 2328) (optional)
	RIP-to-OSPF Route Redistribution
	Secure Shell 2
IPDR (Future 2005)	
Secure FTP (Future 2005)	
TACACS+ Authentication & Accounting (Future 2005)	
Regulatory Safety: UL, CE EMC: FCC Part 15 Class A, CE	

Ordering Information

DOCSIS 2.0 Models

ARRIS WMTS;	
1 downstream & 2 upstreams;	
North American power cord 620171	
ARRIS WMTS;	
1 downstream & 4 upstreams;	
North American power cord 620172	
ARRIS WMTS;	
1 downstream & 6 upstreams;	
North American power cord 620173	

Software available for each WMTS:

Software Rel. 4.1 Kit (required) 620190
RIPv2 Routing License 713868
VLAN/Bridge Group License 713869
RIPv2 & VLAN/Bridge Group License 713870
OSPFv2 Routing License 714827
OSPFv2 Routing License & VLAN/Bridge Group License 714828

Maintenance Plan (required):

Software Maintenance - Phone Silver 710645
Software Maintenance - Phone Gold 710646

Upgrade Kits

2 Upstream Ports 714877K
Compact DC Power Module (-48 VDC) 710626
Compact AC Power Module (AC) 710625

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