

ClearLink® Universal DAS Interface Tray (UDIT™)



General Description

ClearLink® UDIT™ is a modular, scalable active DAS Interface which provides Radio Frequency (RF) signal conditioning between the Base Transceiver Station (BTS) and a Distributed Antenna System (DAS). UDIT may be used in a single or multi-operator (Neutral Host) systems. UDIT is DAS and BTS vendor neutral, providing a common BTS interface and simplifying deployment, commissioning and training. Signals from multiple operators using different technologies can be combined and balanced to ensure power is properly allocated and maintained. Designed to maximize Return on Investment (ROI); UDIT occupies up to 60% less valuable space than comparable passive solutions.

UDIT consists of a 13 slot Sub-Rack chassis which holds one control module with integrated Power Supply Unit (PSU) and up to 12 Point Of Interface (POI) or Passive Splitter/Combiner modules. UDIT can be mounted to two-post or four-post racks with the included hardware. Each plug-and-play UDIT POI is hot-swappable and automatically detected by the system. All UDIT cabling is accessible from the front. Adding to and/or reconfiguring an installed system can be done without interrupting the rest of the system.

The UDIT Control/PSU Module provides power to all the modules installed in the UDIT Chassis. It also provides a Graphical User Interface (GUI) for configuration, status and alarm information. Alarms generated in the UDIT system can be monitored locally or remotely through Simple Network Management Protocol (SNMP).

The Passive Splitter/Combiner Module divides or sums signals going between the BTS and DAS. As a Combiner it allows the system to resolve spectral density issues by allowing disparate frequency bands to be grouped together and passed to the DAS. As a Splitter it allows one BTS path to be split across up to 4 DAS zones.

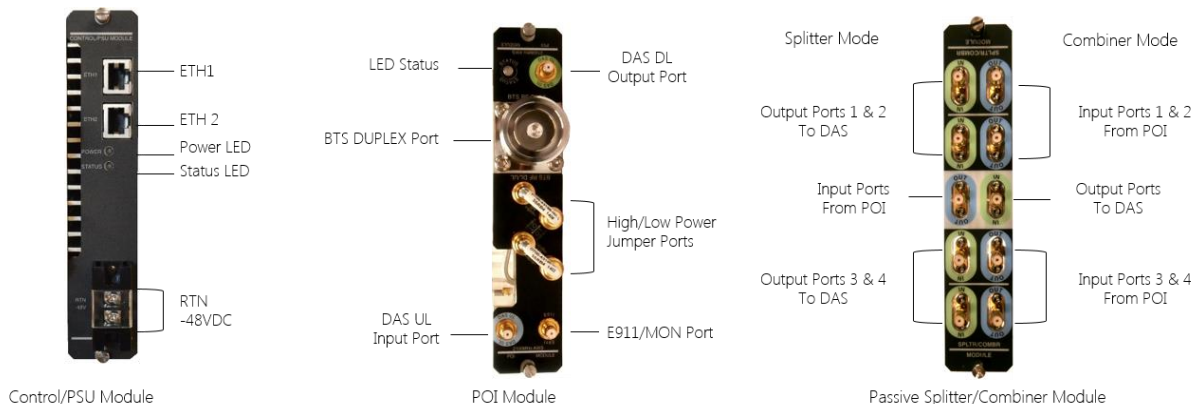
The slots in the Cable Manager allow flexibility in securing BTS and DAS cables. Cables can be routed from the front of the UDIT Chassis to the rear of the rack or vertically along the front of the UDIT Chassis and across Cable Managers mounted above and below the UDIT.



Universal DAS Interface Tray

Product Highlights

- High power BTS conditioning (Up to 100W)
- Industry's lowest Insertion Loss in DL path
- DAS vendor neutral
- Low Passive Intermodulation (PIM)
- Programmable Dynamic DL Power Control
- User Programmable downlink Power Level Control for balancing Neutral Host Application
- Built in power detection to monitor input and output power in real time
- Integrated web GUI access for remote and local configuration, management and monitoring of alarms
- Plug-and-play automatic module detection and configuration
- Hot swappable POI modules and fans
- All front cabling
- SNMP traps for NOC alarm monitoring



ClearLink® Universal DAS Interface Tray (UDIT™)



Electrical Specifications

EMI	FCC Part 15, Class B
Power Consumption	
Chassis w/Control Module	75 Watts Max (@ -48VDC)
Control Module	9.6 Watts Max (@ -48VDC)
POI Module	7.0 Watts Max (@ -48VDC)

Environmental Specifications

Operating Temperature	-40°F to +140°F (-40°C to +60°C)
Relative Humidity	Up to 95% (non-condensing)

Mechanical Specifications

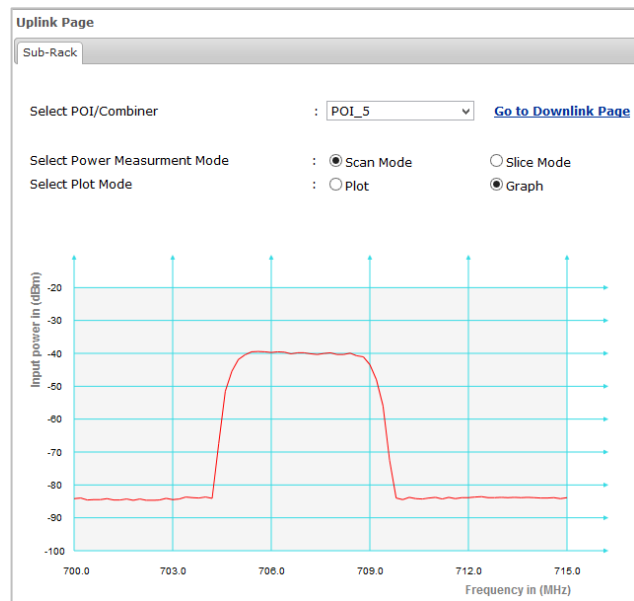
Dimensions		Weight	
Chassis	7 x 19.13 x 20.64 in.	Chassis	14.3 lbs
Control Module	7 x 1.3 x 16.9 in.	Control Module	3.3 lbs
Passive Splitter/Combiner Module	7 x 1.3 x 4.3 in.	Passive Splitter/Combiner Module	2.0 lbs
POIs	7 x 1.3 x 16.9 in.	POI Module	5.5 lbs
Cable Management	1.73 x 19 x 2.4 in.	Cable Management	2.1 lbs

Device Information (Primary Unit)

Host Name: UDIThost
 Serial Number: E100CF140120
 Software Revision: 01.03.00
 Location: ProductMgmt
 System Uptime: 7 day(s) 17 hour(s) 49 minute(s) 7 second(s)
 Control Module Temperature: 47.00 °C
 Fan Status: [Icons]

Slot	Type	Name	Band	DL Input Power (dBm)	Status
1	Duplex	CSI LAB POI 1	LTE 700	24.87	●
2	Duplex	POI_2	CELL	-9.82	●
3	Duplex	POI_3	L7	36.63	●
4	Combiner	Combiner_1	MULTI	-	●
5	Duplex	POI_5	U7	35.87	●
6	Duplex	POI_6	PCS	-7.54	●
7	Duplex	POI_7	AWS	29.96	●
8	Empty	-	-	-	●
9	Empty	-	-	-	●
10	Empty	-	-	-	●
11	Access Denied	-	-	-	●
12	Access Denied	-	-	-	●

Example of UDIT GUI



POI Uplink Spectrum Display



ClearLink® Universal DAS Interface Tray (UDIT™)



Performance Characteristics

POI Module			
PIM (2 x 43 dBm)	≤ -153 dBc		
Composite Input Power / Maximum (BTS Port)	+50 dBm (100 Watts) High Power Mode, +40 dBm (10 Watts) Low Power Mode		
BTS Port DL Return Loss	≥ 18 dB		
DL Output Return Loss	≥ 16 dB		
Programmable Dynamic DL Power Control	Available		
DL Attenuation Range (nominal)	31 dB in 1 dB steps		
DL Insertion Loss (typical)	Band	High Power Mode	Low Power Mode
	L7 – 700 MHz lower	12.3 dB	2.0 dB
	U7 – 700 MHz upper	12.7 dB	2.5 dB
	S8 – SMR 800 MHz	12.6 dB	2.3 dB
	850 – 850 MHz	12.6 dB	2.3 dB
	PCS – 1900 MHz	15.2 dB	4.8 dB
	AWS+3 – 2100 MHz	14.4 dB	3.7 dB
	WCS – 2300 MHz	14.9 dB	4.2 dB
UL Gain Control Range	70 dB (+8 to -62 dB in 1 dB steps)		
BTS Port UL Return Loss	15 dB minimum		
UL Output Return Loss	≥ 15 dB (18 dB typical)		
Power Measurement	Available for both Downlink and Uplink		
Passive Splitter/Combiner Module			
Operating Frequency Range	698 – 2360 MHz		
Insertion Loss	7.5 dB typical		
Return Loss	≥ 14 dB		
Isolation	≥ 20 dB		
Composite Maximum Power	+30 dBm (1 Watt)		

Interface (All connectors are accessible on the front panel)

Control Module	
Power	Two terminal posts
Eth1	RJ45
Eth2	RJ45
POI Module	
Interfaces	Web Server (HTTPS), SNMP v1, v2 and v3
Function	Connector Style
BTS RX/TX	7/16 DIN(f) (Duplex)
TX (Downlink)	QMA (f) or SMA (f) (Simplex)
Rx (Uplink)	QMA (f) or SMA (f) (Simplex)
E911/MON Port	QMA (f)
General Alarm	Integrated System Management, Summary Alarm output, LED
Passive Splitter/Combiner Module	
All ports	QMA (f)

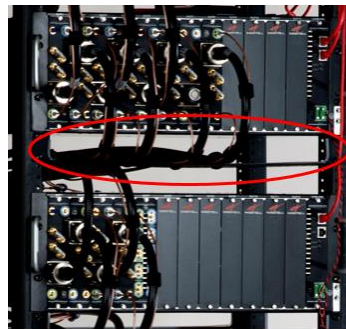


ClearLink® Universal DAS Interface Tray (UDIT™)



Product Features

- BTS Conditioning
- Local and Remote Controllable via Web or Mobile App
- Remote and Local monitoring of Active Alarms and Power Levels
- User Profile Password Protection
- Self-Discovery of Modules and Sub-Racks
- System and User Logs
- 4:1 Passive Splitter/Combiner for Signal Management



UDIT System



Cable Management

Ordering Information

Description	Model Number	Part Number
Chassis frame with Control module	UDIT-CH1-CM1D-XXEN-194U	CS18-115-127
Chassis frame with Control module and 12 blank panels	UDIT-CH1-CM1D-XXEN-194U-12BP	CS18-115-128
Cable Management, 19"	UDIT-1UCM	CS18-115-124
Chassis, 4U, 19" Rack Mount	UDIT-CH1-194U	CS18-115-100
Control Module, -48VDC	UDIT-CM1D-XXEN	CS18-115-101
Passive Splitter/Combiner, 4-Way Passive, 698 - 2360 MHz	U-SC14PX	CS18-115-113

POI Module	Downlink	Uplink	QMA Model Number	SMA Model Number	Part Number
L7 - 700 MHz lower	728-746	698-716	U-P1DL70050DDQA	U-P1DL70050DDSA	CS18-115-141Q
U7 - 700 MHz upper	746-757	776-787	U-P1DU70050DDQA	U-P1DU70050DDSA	CS18-115-142Q
S8 - SMR 800 MHz	851-869	806-824	U-P1D800050DDQA	U-P1D800050DDSA	CS18-115-143Q
850 - 850 MHz	869-894	824-849	U-P1D850050DDQA	U-P1D850050DDSA	CS18-115-144Q
PCS - 1900 MHz	1930-1995	1850-1915	U-P1DP10050DDQA	U-P1DP10050DDSA	CS18-115-145Q
AWS+3 - 2100 MHz	2110-2180	1710-1780	U-P1DA30050DDQA	U-P1DA30050DDSA	CS18-115-148Q
WCS - 2300 MHz	2350-2360	2305-2315	U-P1D230050DDQA	U-P1D230050DDSA	CS18-115-147Q

POIs come standard with QMA output connectors. SMA available by special order.

Accessory Ordering Information

Description	Model Number	Part Number
Power supply module, AC to 48VDC	UDIT-PS-48VMOD	CS18-200-100
Power supply chassis with 1 module, AC to -48VDC	UDIT-PSCH-148VMOD	CS18-200-101
Power supply chassis with 2 modules, AC to -48VDC	UDIT-PSCH-248VMOD	CS18-200-102
Blank covers for POI slots	UDIT-Pblank	CS18-115-114
FAN replacement for UDIT Chassis	UDIT-FAN	CS18-115-115
QMA Tool		CS48-132-622
Hi//Low Jumper	UDIT-POI-HL-JMPR	700-43188-001

Power supplies are only required for installations where -48VDC is not available. The CS18-200-102 will support up to 4 UDIT Sub-Racks. Custom cable assemblies are available upon request, including those with right angle adapters. Additional accessories such as, wireless MODEM, connectors and cables are also available. Call Westell at 1.877.844.4274 for details.



WESTELL