



## MobileAccessVE Dual-Band Instant Coverage Solution

The MobileAccessVE Dual-Band solution provides enhanced, cost effective, in-building coverage for any enterprise environment. This solution is quickly and easily deployed using the existing cable infrastructure to provide instant coverage without affecting existing LAN services or performance. MobileAccessVE minimizes operational disruption while providing a scalable and flexible solution at a significantly lower total installation cost.

### The MobileAccess VE Solution

The MobileAccessVE solution consists of the following main components:

- **VE Control Unit (VCU)** - interfaces with the Service Provider's RF capacity sources and VE Access Pods (VAPs). It combines the wireless services with the Ethernet services and distributes them to the VAPs over CAT-5e/6 cables. Coverage can be expanded by connecting up to 12 Slave VCUs where the Master VCU interfaces to the RF capacity source and the Slave VCUs interface to the VAPs (up to 12). The Master VCU can also support any combination of up to 12 Slave VCUs and VAPs. Each VCU can serve as either Master or Slave depending on its connections.
- **VE Access Pods (VAPs)** – Distributes wireless services and provide Ethernet/IP connectivity, and PoE pass-through, to connected IP appliances such as WiFi APs and IP Phones. VAPs are distributed at strategic locations over one or more floors, and plug into RJ-45 jacks, which are connected to the VCU via exiting CAT-5e/6 infrastructure. They are remotely powered by the VCU utilizing PoE, eliminating the need for local powering. VAPs are equipped with internal antennas, as well as with connectors for (optional) external antennas connection.



MobileAccessVE Control Unit

### Key Features and Benefits

#### Low Deployment Cost

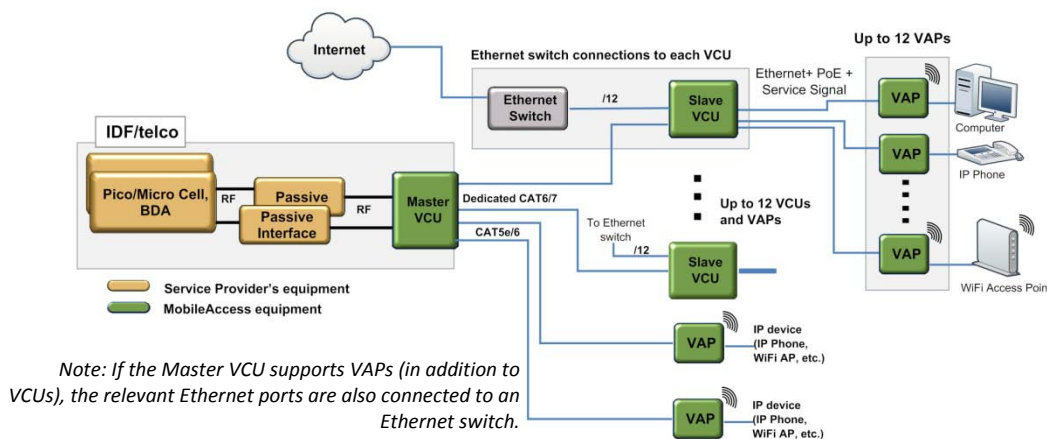
- ▶ Connects over existing CAT-5/6 cabling infrastructure and existing Ethernet jacks
- ▶ Simple installation - Deployed in only a few hours, with minimum disturbance to the enterprise
- ▶ VAPs are remotely powered using Power-over-Ethernet (PoE) –Local power is not required
- ▶ Minimum macro-network impact with low power distributed coverage
- ▶ Seamlessly coexists with the Enterprise LAN and does not consume LAN capacity

#### Flexible and Scalable Architecture

- ▶ Connects to all types of capacity sources: BTS, Picocells, Femtocells and BDAs
- ▶ VAPs can be easily relocated for coverage modifications as needed
- ▶ Ease of expansion provides 'pay as you grow' scalability
- ▶ Support of connected IP devices (WiFi APs, IP Phones etc) with Ethernet/IP pass through and PoE maximizes placement flexibility

#### Carrier-Grade Management

- ▶ Remote end-to-end system monitoring, management and configuration using a standard web browser and SNMP



## System Specifications

### RF Frequency Range

Services	Frequency Range (MHz)	
	Uplink	Downlink
UMTS*	1920-1980	2110-2170
PCS**	1850-1910	1930-1990
DCS**	1710-1785	1805- 1880
EGSM*	880-915	925-960
CELL*	824-849	869-894

\* Supports configurable contiguous bandwidth of up to 15 MHz DL and 15 MHz UL anywhere on the band

\*\* Supports configurable contiguous bandwidth of up to 20 MHz DL and 20 MHz UL anywhere on the band

### RF Parameters

Each Service per Access Pod		
	Downlink	Uplink
Composite Output Power (dBm)		
UMTS	14	-
PCS	14	-
DCS	12	-
EGSM	9	-
CELL	9	-
Noise Figure (dB)	-	13
Mean Gain (dB)	Adjustable	-15 to +5
Max Input Power (with AGC) (dBm)	33	-25
Input Power Range (dBm)	0-33	-
Gain Flatness (dB)	+/- 2.0	

### Infrastructure

Cable Type	Cable Requirements	Distance Limitations
VAP-VCU	Unshielded or Shielded Twisted Pair (STP), CAT-5e/6, 24 AWG min	10-100 meters (30-300ft)
Slave VCU-Master VCU	Shielded Twisted Pair (STP), CAT-6/7, 24 AWG min	10-100 meters (30-300ft)

### Standards and Approvals

Safety: IEC 60950-1: 2003; UL-60950-1:2003; CAN/CSA – C22.2 No 60950-1-03

EMC: EN 301489-8 V1.2.1:2002; EN 301489-1 V1.5.1:2004; EN 61000 V4.6:2005; EN 55022 V4.2:2001 / FCC Part 15

GSM/DCS Complies with EN-301502 V8.1.2: 2001; EN-301908 v3.2.1:2006; EN 300 609-4 V8.02:2000

CELL/PCS Complies with FCC Part 24

UMTS Complies with EN 301 908-11

SAR Body Testing - complies with EN 50385 & FCC OET65C:2001

### Management

Web-based management over LAN connection

SNMP Management

Static IP address preset

### Physical Specifications

	Control Unit (Master/Slave VCU)	MobileAccessVE Access Pod
Supported Services	CDMA, W-CDMA, TDMA & GSM800 @ CELL800, GSM/GPRS & UMTS @ EGSM900, GSM/GPRS & UMTS @ DCS1800, CDMA, W-CDMA & GSM/GPRS @ PCS1900, UMTS @ UMTS2100	
Power		
Input Voltage	90-264V AC, 47-63 Hz	48V DC via PoE (no local supply)
Power Consumption	350W (fully loaded)	16W
Cabling Interfaces	(2) N-type Female, 50 ohm interfaces to carrier equipment (1) RJ-45 connector to Master Control Unit (1) RJ-45 connector for management (1) D-Type 9 female for local craft (1) D-Type 9 female for alarms outputs (12) RJ-45 connectors for Access Pods (12) RJ-45 connectors for Ethernet Switch	(1) RJ-45 connection for Control Unit (1) RJ-45 connector for Ethernet terminal (2) SMA connectors for (optional) external antennas
Remote Management	SNMP, standard HTTP web browsing over TCP/IP	Managed via Control Unit
Physical		
Dimensions	48.3 x 51.3 x 8.88 cm (2U in standard 19" rack)	180 x 180 x 40 mm
Weight	9.8 kg	1.1 kg without mounting adaptor
Environmental		
Operating Temp	0°C to +50°C (32°F to +122°F)	0°C to +40°C (32°F to +104°F)
Storage Temp	-20°C to +70°C (-4°F to +158°F)	-20°C to +70°C (-4°F to +158°F)
Humidity	10% - 95% non-condensing	10% - 95% non-condensing

## Ordering Information

MobileAccess VE Control Units	
VCU-EGSM-UMTS-12E	Dual-Band VE Control Unit for EGSM/UMTS Bands, 12 Ports, Shared CAT5e
VCU-DCS-UMTS-12E	Dual-Band VE Control Unit for DCS/UMTS, 12 ports, Shared CAT5e
VCU-CELL-PCS-12E	Dual-Band VE Control Unit for CELL/PCS Bands, 12 Ports, Shared CAT5e
MobileAccess VE Access Pods	
VAP-EGSM-UMTSE	Dual-Band VE Access Pod for EGSM/UMTS Bands, Shared CAT5e
VAP-CELL-PCSE	Dual-Band VE Access Pod for CELL/PCS Bands, Shared CAT-5e
VAP-DCS-UMTSE	Dual-Band VE Access Pod for DCS/UMTS Bands, Shared CAT-5e

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