

# ISO 19079:2016-10 (E)

## Intelligent transport systems - Communications access for land mobiles (CALM) - 6LoWPAN networking

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>2</b>
<b>4</b>	<b>Symbols and abbreviated terms .....</b>	<b>4</b>
<b>5</b>	<b>Requirements: ITS-Station 6LoWPAN Nodes .....</b>	<b>4</b>
5.1	Categories .....	4
5.2	ITS-S nodes implementing 6LoWPAN .....	5
5.2.1	Requirements for all ITS-S 6LoWPAN nodes .....	6
5.2.2	ITS-S 6LoWPAN nodes deployed in roadside ITS sub-systems .....	8
5.2.3	ITS-S 6LoWPAN LAN nodes deployed in vehicle ITS sub-systems .....	9
5.3	The IoT management service entity .....	10
5.3.1	The 6LoWPAN forwarding module .....	10
5.3.2	Internal ITS-S 6LoWPAN interface module .....	11
5.3.3	External 6LoWPAN interface modules .....	11
5.3.4	6LoWPAN/IPv6 Compression module .....	11
5.3.5	6LoWPAN/IPv6 security module .....	12
5.4	Modules implemented in ITS-S 6LoWPAN nodes .....	14
5.4.1	ITS-S 6LoWPAN host modules .....	16
5.4.2	ITS-S 6LoWPAN ad-hoc router modules .....	16
5.4.3	ITS-S 6LoWPAN access router modules .....	16
5.4.4	ITS-S 6LoWPAN-IPv6 border router modules .....	16
5.5	The 6LoWPAN address configuration .....	17
5.5.1	General .....	17
5.5.2	Consideration on address configuration .....	17
5.5.3	Address configuration and Optimized Neighbor Discovery .....	17
5.5.4	Examples: Message Exchange .....	18
5.6	Optional features and functions .....	19
5.6.1	IPv6-IPv4 interoperability .....	19
5.6.2	IPv6 priority .....	19
<b>Annex A (normative)</b>	<b>General usage for MAC-PHY interface: IEEE 802.15.4 Communication and Management Interface Adaptation for IoT MSE .....</b>	<b>20</b>
<b>Annex B (normative)</b>	<b>ASN.1 module .....</b>	<b>24</b>
<b>Bibliography .....</b>		<b>25</b>