

# SYSTEMS FACTFILE



## No. 31 Milan, Italy

As well as being a political and economic power base, Italy's second-largest city is also famed for fashion and its passion for football. Neil Pulling explores the large and varied tram operation, part of a complex public transport network.

REPORT AND PHOTOGRAPHY BY NEIL PULLING



**M**ilan (Milano) lacks a prominent river or hills to help visitors get a grip on its layout, conditions which may prompt establishing order through the tramway layout allied to a system map. However, a profusion of tracks, multi-line junctions, unexpected encounters with back-street termini and a dearth of such maps largely rules that out. Exploring in hope nevertheless reveals a fascinating multi-mode network that includes brand new vehicles operating alongside others that elsewhere would normally be found in heritage use or grounded as coffee bars.

Capital of the Lombardy region, Milan is the core of Italy's biggest metropolitan area with a population of over four million; trams form part of one of Europe's most comprehensive public transport systems. Attaining its greatest extent before bombing raids in the later years of World War Two, the intricacy of a network that began in the 1860s still remains evident. Tracks in the centre were restored to an ancient street plan that was largely retained during post-war rebuilding. Reductions are apparent, with rails merging into road surfaces, disappearing beneath newsstands, or lying idle where route changes have rendered track redundant.

Reserved space abounds in various configurations, but knots of traffic incorporating trams can build up around intersections. Accidents became common enough to prompt 25km/h (16mph) speed limits being imposed on trams in the centre, with reported collisions and derailments falling from 75 in 2008 to 33 in 2009 due to the change. Many stops have compound names, for example Sempioni/Arona; the first part indicates a district or the road that the tramway is following, the second usually the nearest road intersection.

From origins in 1931, city-owned Azienda Trasporti Milanese (ATM) runs the network. With over 50% of all city car journeys being under 4km (2.5 miles), containing private vehicle use remains a challenge and broad long-term plans have been used to tackle the limitations of trams for long urban journeys using shared road space. The first was developing Milan's metro (Metropolitana – now Italy's largest) from its initial 1964 opening. Since then it has grown to a three-line 74km (46-mile) system with extensions and entirely new lines due in the coming years.

M4 is the designation for a future east-west line to include Linate Airport; M5 is in advanced construction along an

The long and the short of it: seven-section *Sirio* 7143 leaves Niguarda Parco Nord loop with *Ventotto*s in the background.



**NETWORK FACTS**

- **Routes:** 21
- **Track distance:** 298km (186 miles)
- **Opened:** 1862 (electrification during 1890s)
- **Gauge:** 1445mm
- **Power:** 600V dc
- **Passenger fleet (approx):** 550
- **Transport operator:** Azienda Trasporti Milanesi (ATM)
- **INFORMATION:**  
**Transport network:** [www.atm-mi.it](http://www.atm-mi.it)  
**Tourist information:** [www.turismo.milano.it](http://www.turismo.milano.it)  
**Civic information:** [www.comune.milano.it](http://www.comune.milano.it)

Left: Air-conditioning equipped *Jumbotram* 4987 is reversed into the splendour of Messina depot on 22 January 2010.

axis partly shared by the new line 31. This is the latest of the Metrotramvia projects whereby new or upgraded tracks butt onto the main network for faster transits in outer districts. The first pair, Metrotramvia South and North, opened in late 2003, the latter in part created by adopting an inter-urban tramway.

This was cut back to the present interchange at Niguarda Parco Nord where buffer stops are mounted on the through-tracks. Plans for doubling the residual inter-urban single line for incorporation as Metrotramvia became firmer with funding announced in January 2010.

Metrotramvia is an integrated rather than free-standing format (nor is it separately designated on vehicles) and like earlier lines has turning facilities for the uni-directional tram fleet. At the modern northern end of line 7, this is within Precotto depot, the newest of five on the system, which opened in 2007 on the existing ATM metro maintenance site. Its functional structure contrasts with the bold architecture of the Messina depot built in 1912; just off lines 12 and 14 near Cenisio/Messina stop. ATM also operates three trolleybus lines and over 1100km (660 miles) of bus routes in greater Milan. **TAUT**



Formerly used cross-city as with 7016 at Piazza Cordusio in June 2007, *Eurotrams* are now a mainstay of Metrotramvia South line 15.



Above: On 22 January 'Milan Yellow'-liveried *Siriotta* 7612 passes Metro line 5 work along Viale Fulvio Testi.



Left: *Sirio* 7138 approaches Parco Nord/Centro Scolastico on the Metrotramvia 31 line.

**MILAN: ESSENTIAL FACTS**

**How do I get there?**

**By rail:** Timetabling on [www.bahn.com](http://www.bahn.com) is recommended for evaluating the various routings to Milan. Timings are upwards of 11 hours for London - Milan via Paris.

**By air:** Linate Airport gives the quickest city access amongst Milan's three airports. More flights serve Malpensa, around one hour by Malpensa Express trains to Milan Cadorna or bus to Centrale. Bergamo (Aeroporto Orio al Serio) also has direct buses, although travel via Bergamo station gives sight of the TEB light rail line opened in 2009.

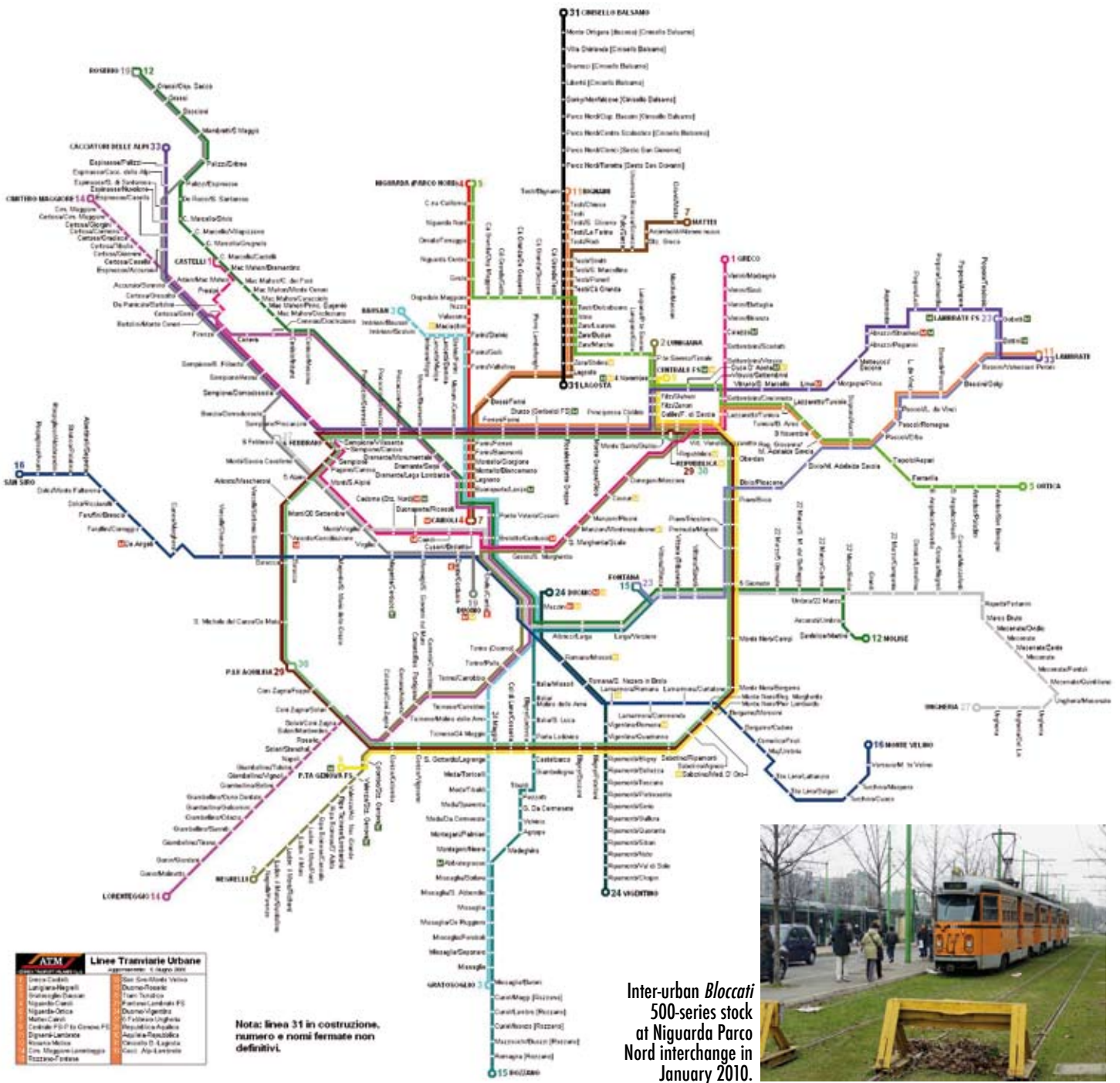
**Local travel:** Signs at stops show the whole network, but for extended travel it may prove necessary to buy a commercial map. Locations on shelters are not necessarily the stop's title, and be prepared for trams showing the opposite destination to its actual heading. Such entertainment comes cheaply however, with a day pass for

ATM modes and suburban trains within urban boundaries costing EUR3. These and tickets for wider coverage are available at metro stations, kiosks, or bars showing ATM stickers.

**What is there to see?**

A very small area contains most attractions for the general tourist. Adjoining Piazza del Duomo (Metro: Duomo), elaborate decoration characterises the immense cathedral and Galleria Vittorio Emanuele II arcade. A plain exterior makes nearby La Scala opera theatre easily missed, something unlikely with the monumental Milano Centrale (Metro: Centrale; tram: 4 Novembre), one of the world's great railway stations. Within an hour's rail travel north by FS or Le Nord is Como. Ferries and an ATM-operated funicular provide contrasting views of the lake - Le Nord Como Lago station is closest to the waterside.





Trams edge towards Piazza Cordusio intersection in central Milan on 25 June 2007.

**THE FLEET**

The 1500-series, variously 'Peter Witt' (relating to Cleveland USA origin), *Carelli* or *Ventotto* 28 (reference to 1928 introduction in Milan) remains the most numerous type. With a wealth of experience and components to draw upon from the once 500-strong production series built by several contractors, over 150 are in regular use.

With loading improved by the addition of rear doors to the single cars in the 1930s and ample circulating space between lateral seating, the 13.9m *Ventotto* remains highly effective, especially in city centre use.

Later ATM trams, the 4600, 4700 and double-articulated *Jumbotram* series 4800 and 4900 also have high-stepped access. Of this group only the 4900-series – delivered from 1976 and now being fitted with air-conditioning – has a long future.

Latterly re-allocated to Metrotramvia South using the Fontana city terminus, a now depleted fleet of 26 Adtranz *Eurotrams* were ordered, starting Milan's first real low-floor services in 1999. The similarly-sized 35.4m version of AnsaldoBreda's *Sirio* was introduced in 2002 with has a capacity for 285. More suited to cross-city use, the newest ATM vehicle is the 26.5m *Sirio* variant first presented in late 2007. The diminutive *Siriello* name appears on those being delivered in 'Giallo Milano' (Milan Yellow) and cream livery applied on *Ventottos* from 2007.

The modern AnsaldoBreda vehicles will see withdrawals which will also affect classes up to and including the early *Jumbotrams*.